

**CLAIM AMENDMENTS**

Please amend the claims as described below. In accordance with 37 CFR §1.121, a complete listing of all claims in the application is provided below. The status of each claim is indicated in the parenthetical expression adjacent to the corresponding claim number.

**Claims 1-31 (Canceled).**

1        **32. (Currently Amended)** An electromechanical device comprising:  
2        a substrate;  
3        an insulation layer disposed on the substrate;  
4        a first semiconductor layer disposed on or above the insulation layer;  
5        an anchor that is disposed in an opening in the insulation layer and the first  
6        semiconductor layer and contacts the substrate, wherein the anchor includes a material  
7        that is different than the insulation layer;  
8        a second semiconductor layer, disposed on the anchor and on the first  
9        semiconductor layer; and  
10       a fixed electrode, formed, in part, from the first and second semiconductor layers,  
11       wherein the fixed electrode is affixed to the substrate via the anchor.

1        **33. (Previously Presented)** The device of claim 32 wherein the anchor includes  
2        silicon nitride, silicon carbide, germanium, silicon/germanium or gallium arsenide.

1        **34. (Previously Presented)** The device of claim 32 wherein the insulation layer  
2        includes silicon nitride or silicon oxide.

1           35. **(Previously Presented)** The device of claim 32 further including a moveable  
2 electrode, juxtaposed the fixed electrode, wherein the moveable electrode is formed in part  
3 from the second semiconductor layer.

1           36. **(Previously Presented)** The device of claim 35 wherein the insulation layer  
2 includes silicon oxide and the anchor material includes silicon nitride, silicon carbide,  
3 germanium, silicon/germanium or gallium arsenide.

1           37. **(Previously Presented)** The device of claim 35 wherein the insulation layer  
2 includes silicon oxide and the anchor material includes silicon, silicon carbide, germanium,  
3 silicon/germanium, or gallium arsenide.

1           38. **(Previously Presented)** The device of claim 35 wherein the insulation layer  
2 includes silicon nitride and the anchor material includes silicon, silicon oxide, silicon  
3 carbide, germanium, silicon/germanium or gallium arsenide.

1           39. **(Previously Presented)** The device of claim 32 wherein a substantial portion  
2 of the fixed electrode overlying the anchor material is a monocrystalline silicon.

1           40. **(Previously Presented)** The device of claim 32 wherein a substantial portion  
2 of the fixed electrode overlying the anchor material is a polycrystalline silicon.

1           41. **(Currently Amended)** The device of claim 32 further including:

2 a chamber, defined in part by a first encapsulation layer having at least one vent;  
3 a moveable electrode disposed in the chamber and juxtaposed the fixed electrode;  
4 a second encapsulation layer, deposited over or in the at least one vent, to thereby  
5 seal the chamber, wherein the second encapsulation layer includes a semiconductor  
6 material.

1 42. (Previously Presented) The device of claim 41 wherein the second  
2 encapsulation layer includes polycrystalline silicon, porous polycrystalline silicon,  
3 amorphous silicon, silicon carbide, silicon/germanium, germanium or gallium arsenide.

1 43. (Previously Presented) The device of claim 42 wherein the first encapsulation  
2 layer includes polycrystalline silicon, porous polycrystalline silicon, amorphous silicon,  
3 germanium, silicon/germanium, gallium arsenide, silicon nitride or silicon carbide.

1 44. (Previously Presented) The device of claim 41 wherein:  
2 the first encapsulation layer is a semiconductor material that is doped with a first  
3 impurity to provide a first region of a first conductivity type, and  
4 the semiconductor material of the second encapsulation layer is doped with a  
5 second impurity to provide a second region with a second conductivity type and wherein  
6 the first conductivity type is opposite the second conductivity type.

1 45. (Previously Presented) The device of claim 41 further including a contact  
2 having at least a portion that is disposed outside the chamber.

1           **46. (Previously Presented)** The device of claim 41 wherein a first portion of the  
2 first encapsulation layer is a monocrystalline silicon and a second portion of the first  
3 encapsulation layer is a polycrystalline silicon.

1           **47. (Previously Presented)** The device of claim 41 wherein a first portion of the  
2 first encapsulation layer is a monocrystalline silicon and a second portion of the first  
3 encapsulation layer is a porous or amorphous silicon.

1           **48. (Previously Presented)** The device of claim 47 wherein the second  
2 encapsulation layer overlying the second portion of the first encapsulation layer is a  
3 polycrystalline silicon.

1           **49. (Previously Presented)** The device of claim 48 includes a field region  
2 disposed outside and above the chamber wherein the field region is a monocrystalline  
3 silicon.

1           **50. (Currently Amended)** An electromechanical device comprising:  
2 a substrate;  
3 an insulation layer disposed on the substrate;  
4 a first semiconductor layer disposed on or above the insulation layer;  
5 an anchor that is disposed in an opening in the insulation layer and the first  
6 semiconductor layer and contacts the substrate, wherein the anchor includes a material  
7 that is different than the insulation layer;

8 a second semiconductor layer, disposed on the anchor; and  
9 a fixed electrode, formed, in part, from the second semiconductor layer, wherein the  
10 fixed electrode is affixed to the substrate via the anchor;  
11 a moveable electrode, formed in part from the second semiconductor layer, wherein  
12 the moveable electrode is disposed in a chamber wherein the chamber is defined in part by  
13 a first encapsulation layer;  
14 a second encapsulation layer, deposited over or in the at least one vent, to thereby  
15 seal the chamber, wherein the second encapsulation layer includes a semiconductor  
16 material;  
17 a contact; and  
18 a trench, disposed around at least a portion of the contact, wherein the trench is  
19 disposed outside the chamber and wherein the trench includes a first material disposed  
20 therein to electrically isolate the contact.

1 51. (Previously Presented) The device of claim 50 wherein the second  
2 encapsulation layer includes polycrystalline silicon, porous polycrystalline silicon,  
3 amorphous silicon, silicon carbide, silicon/germanium, germanium, or gallium arsenide.

1 52. (Previously Presented) The device of claim 51 wherein the first encapsulation  
2 layer includes polycrystalline silicon, porous polycrystalline silicon, amorphous silicon,  
3 germanium, silicon/germanium, gallium arsenide, silicon nitride or silicon carbide.

1           53. (Previously Presented) The device of claim 50 wherein the first material is  
2 disposed on at least the outer surfaces of the trench.

1           54. (Currently Amended) The device of claim 53 wherein ~~the trench includes a~~  
2 ~~second semiconductor material is disposed in the trench, wherein the semiconductor~~  
3 ~~material is surrounded by the first material in the trench and wherein the second material is~~  
4 ~~a semiconductor material.~~

1           55. (Previously Presented) The device of claim 53 wherein the trench is disposed  
2 on an etch stop region.

1           56. (Previously Presented) The device of claim 53 wherein the etch stop region is  
2 a silicon nitride or silicon dioxide.

1           57. (Previously Presented) The device of claim 53 wherein the first material is a  
2 silicon nitride or silicon dioxide.

1           58. (Previously Presented) The device of claim 53 wherein the trench surrounds  
2 the contact.

1           59. (Previously Presented) The device of claim 50 wherein the anchor includes  
2 silicon nitride, silicon carbide, germanium, silicon/germanium or gallium arsenide.

1           60. **(Previously Presented)** The device of claim 50 wherein the insulation layer  
2 includes silicon nitride or silicon oxide.

1           61. **(Previously Presented)** The device of claim 50 wherein the insulation layer  
2 includes silicon oxide and the anchor material includes silicon nitride, silicon carbide,  
3 germanium, silicon/germanium or gallium arsenide.

1           62. **(Previously Presented)** The device of claim 50 wherein the insulation layer  
2 includes silicon nitride and the anchor material includes silicon, silicon oxide, silicon  
3 carbide, germanium, silicon/germanium or gallium arsenide.

1           63. **(Previously Presented)** The device of claim 50 wherein a substantial portion  
2 of the fixed electrode overlying the anchor material is a monocrystalline silicon.

1           64. **(Previously Presented)** The device of claim 50 wherein a substantial portion  
2 of the fixed electrode overlying the anchor material is a polycrystalline silicon.

1           65. **(NEW)** An electromechanical device comprising:  
2 a substrate;  
3 an insulation layer disposed on the substrate;  
4 a first semiconductor layer disposed on or above the insulation layer;

5 an anchor that is disposed in an opening in the insulation layer and the first  
6 semiconductor layer and contacts the substrate, wherein the anchor includes a material  
7 that is different than the insulation layer;

8 a second semiconductor layer, disposed on the anchor and on the first  
9 semiconductor layer;

10 a fixed electrode, formed, in part, from the first and second semiconductor layers,  
11 wherein the fixed electrode is affixed to the substrate via the anchor;

12 a moveable electrode, formed in part from the second semiconductor layer, wherein  
13 the moveable electrode is disposed in a chamber wherein the chamber is defined in part by  
14 a first encapsulation layer;

15 a second encapsulation layer, deposited over or in at least one vent, to thereby seal  
16 the chamber, wherein the second encapsulation layer includes a semiconductor material;

17 a contact; and

18 a trench, disposed around at least a portion of the contact, wherein the trench is  
19 disposed outside the chamber and wherein the trench includes an insulating material  
20 disposed therein.

1 66. (NEW) The device of claim 65 wherein the second encapsulation layer includes  
2 polycrystalline silicon, porous polycrystalline silicon, amorphous silicon, silicon carbide,  
3 silicon/germanium, germanium, or gallium arsenide.



1           67. **(NEW)** The device of claim 66 wherein the first encapsulation layer includes  
2 polycrystalline silicon, porous polycrystalline silicon, amorphous silicon, germanium,  
3 silicon/germanium, gallium arsenide, silicon nitride or silicon carbide.

1           68. **(NEW)** The device of claim 65 wherein the insulating material is disposed on at  
2 least the outer surfaces of the trench.

1           69. **(NEW)** The device of claim 68 wherein a semiconductor material which is  
2 disposed in the trench, wherein the semiconductor material is surrounded in the trench by  
3 the insulating material.

1           70. **(NEW)** The device of claim 68 wherein the trench is disposed on an etch stop  
2 region.

1           71. **(NEW)** The device of claim 68 wherein the etch stop region is a silicon nitride  
2 or silicon dioxide.

1           72. **(NEW)** The device of claim 68 wherein the insulating material is a silicon nitride  
2 or silicon dioxide.

1           73. **(NEW)** The device of claim 68 wherein the trench surrounds the contact.

1           74. **(NEW)** The device of claim 65 wherein the anchor includes silicon nitride,  
2 silicon carbide, germanium, silicon/germanium or gallium arsenide.

1           75. **(NEW)** The device of claim 65 wherein the insulation layer includes silicon  
2 nitride or silicon oxide.

1           76. **(NEW)** The device of claim 65 wherein the insulation layer includes silicon  
2 oxide and the anchor material includes silicon nitride, silicon carbide, germanium,  
3 silicon/germanium or gallium arsenide.

1           77. **(NEW)** The device of claim 65 wherein the insulation layer includes silicon  
2 nitride and the anchor material includes silicon, silicon oxide, silicon carbide, germanium,  
3 silicon/germanium or gallium arsenide.

1           78. **(NEW)** The device of claim 65 wherein a substantial portion of the fixed  
2 electrode overlying the anchor material is a monocrystalline silicon.

1           79. **(NEW)** The device of claim 65 wherein a substantial portion of the fixed  
2 electrode overlying the anchor material is a polycrystalline silicon.